Global Payment Contract Attitudes and Comprehension Among Internal Medicine Physicians

Joshua Allen-Dicker, MD, MPH; Shoshana J. Herzig, MD, MPH; and Russell Kerbel, MD, MBA

ABSTRACT

Objectives: Global payment contracts (GPCs) are increasingly common agreements between insurance payers and healthcare providers that incorporate aspects of risk adjustment, capitation, and pay-for-performance. Physicians are often viewed as potential barriers to implementation of organizational change, but little is known about internist opinion on GPC involvement or specific internist attributes that might predict GPC support. We aimed to investigate internist and internal medicine subspecialist support of GPC involvement, and to identify associations among physician attributes, GPC knowledge, and GPC support.

Study Design: Cross-sectional.

Methods: General medicine and internal medicine subspecialist physicians within the Beth Israel Deaconess Department of Medicine in Boston, Massachusetts, were surveyed 4 years after care organization entry into a GPC. Measurements collected included reported support for GPC involvement, reason for support, and demonstrated comprehension of key GPC details.

Results: Of the 281 respondents (49% response rate), 85% reported supporting involvement in a GPC. In a multivariate ordinal logistic regression model, exposure to prior information about GPCs, demonstrated comprehension of key GPC details, longer time since completion of residency, and lower clinical time commitment were all independently associated with higher levels of GPC involvement support.

Conclusions: Four years since first engaging in a global payment contract, a majority of internal medicine physician respondents support this decision. Understanding predictors of physician support for GPC involvement within our care organization may help other health systems to approach organizational change. Health system leaders debating GPC involvement should consider engaging physicians via educational interventions geared toward improving GPC support.

Am J Manag Care. 2015;21(8):e474-e479

Recent health reform efforts center on developing market incentives to promote high-value care.[1-4] In this environment, global payment contracts (GPCs) are increasingly common. GPCs rely on the sharing of responsibility for cost and quality of care between insurance payers and healthcare providers.[5,6] This approach incorporates aspects of risk adjustment, capitation, and pay-for-performance.

Physicians have been identified as being a potential obstacle to successful implementation of such recent payment reforms.[7-9] Proposed reasons for this challenge include perceived threat to physician autonomy, uncertain financial benefit, physician averseness to risk, and residual antagonism following the managed care organization disputes of the 1990s.[5,10,11] We were not able to locate any publications on the role physicians are playing in the organizational change required for GPC adoption.

Through a survey of general medicine and internal medicine subspecialist physicians in a care organization engaged in multiple GPCs, we aimed to quantify internist support for GPCs, quantify internist comprehension of key information relevant to GPCs, and identify specific physician attributes that might predict GPC support.

METHODS

Setting and Subjects

Beth Israel Deaconess Care Organization (BIDCO) is an independent physician and hospital network in Massachusetts. At the time of this survey, it consisted of several hospitals as well as physician organizations accounting for 1700 physician providers. Of these, the Department of Medicine at Beth Israel Deaconess Medical Center in Boston, Massachusetts, accounted for over 500 physician providers, the majority of whom were paid a salary not based on productivity.

Since 2009, BIDCO has formed GPCs with multiple payer organizations. Existing global payment partners now include Massachusetts Blue Cross Blue Shield via the Alternative Quality Contract (announced 2011), Tufts Health Plan (2011), CMS via the Pioneer Accountable Care Organization program (2012), and Harvard Pilgrim Health Care (2012). At the time of this survey, approximately 60% of patients cared for by BIDCO providers were covered by a GPC.

Take-Away Points

While physicians may be frequently viewed as potential obstacles to organizational change in healthcare, 4 years after an urban care organization engaged in payment system redesign, a majority of internal medicine physician survey respondents were supportive of this decision.

- Physician attributes independently associated with support included greater demonstrated knowledge, prior exposure to informational sources, lower clinical time commitment, and time since residency completion.
- Physician education efforts, whether formal or informal, may be effective tools for shaping physician opinion on an organizational level.

Prior to and immediately following GPC adoption, the hospital and care organization held global payment orientation sessions throughout the provider network. These educational sessions included formal presentations at divisionwide faculty meetings, and more informal presentations at local practice-based business meetings. Select primary care physicians were identified as champions responsible for communicating important global contract details to local primary care physician colleagues. At the time of our survey, no complementary structure existed for other physician specialties. As physician salary was determined by individual affiliated employers and not the care organization itself, GPC adoption did not directly alter physician compensation.

Ongoing organizational outreach efforts include regular distribution of data on utilization, cost, and quality, as well as medical management initiatives to assist providers in achieving the highest quality and efficiency in healthcare delivery within the system.

Survey Design

We designed a 3-part anonymous survey instrument (**eAppendix A**, available at **www.ajmc.com**). The first section collected demographic information, including time since completion of residency, clinical area of practice, time spent on a clinical service, and sources previously consulted to learn about GPCs.

The second section consisted of 10 questions meant to assess comprehension of key concepts related to GPCs. Question topics included definitions and goals, mechanism for billing, role of budgets, role of quality metrics, and organizational-specific information. Question content was developed in conjunction with organizational leadership to ensure accuracy and appropriateness. Respondents were asked not to consult any outside sources while completing this section.

The third section quantified the agreement with the decision to participate in a GPC. The survey asked physicians to rate their level of agreement with the statement, "I support our physician organization's decision to enter into global payment systems (eg, Medicare Accountable Care Organization, Blue Cross Blue Shield Alternative Quality Contract)," using a Likert scale (strongly agree, agree, disagree, strongly disagree). Depending on physician response, an additional question soliciting reasons for agreement or disagreement was included. Respondents could select multiple predefined answer choices that were sourced from the ongoing dialogue on GPCs in the lay and academic press. A free-text "other" response was allowed, as was no response.

Prior to formal survey administration, 2 focus groups were held that included a total of 8 internal medicine physicians who would not be included in the survey population. In a roundtable format, the survey was assessed for length and each individual question was assessed for reliability of physician understanding.

Survey Administration

In June 2013, e-mails containing a unique link to our survey were sent to all physicians within the Department of Medicine at Beth Israel Deaconess Medical Center, which includes general medicine and internal medicine subspecialist physicians. Contact information was obtained from administrative rosters. Over the subsequent month, 2 reminder e-mails were sent to physicians who had not already completed the survey. All e-mails originated from study authors and not departmental or care organization leadership. The institution's Committee on Clinical Investigations certified this research protocol as exempt.

Statistical Analysis

Summary statistics were calculated for all variables. General medicine physicians were defined as those who reported practicing primary care, hospital medicine, or geriatric medicine. Specialist physicians were defined as those who reported practicing any other specialty within internal medicine. Time since residency was dichotomized into less than and greater than or equal to 20 years (the time elapsed since the last attempt at national healthcare reform).[12]

Table 1. Internist Characteristics and Level of Support for Global Payment Contract Involvement

	Overall	Agree or Strongly Agree With GPC Involvement	Bivariable[a]	Multivariable[b]
Years since completion of residency	n (%)	n (%)	*P*	*P*
>20 years	117 (41.6%)	104/117 (88.9%)	*P* = .02	*P* <.01
≤20 years	164 (58.4%)	134/164 (81.7%)		
Specialty				
Generalist	146 (52.0%)	126/146 (86.3%)	*P* = .69	*P* = .28
Specialist	135 (48.0%)	112/135 (83.0%)		
Percentage of time spent on clinical service				
≤0.50 full-time equivalents	131 (46.6%)	115/131 (87.8%)	*P* <.01	*P* <.001
>0.50 full-time equivalents	150 (53.4%)	123/150 (82.0%)		
Exposed to prior education on global payment				
Yes	231 (82.3%)	203/231 (87.9%)	*P* <.01	*P* = .01
No	50 (17.7%)	35/50 (70.0%)		
Global payment knowledge score expressed as percentage				
≥70%	146 (52.0%)	134/146 (91.8%)	*P* <.01	*P* <.01
<70%	135 (48.0%)	104/135 (77.0%)		

GPC indicates global payment contract.
[a]Bivariable *P* value derived from a Fisher's exact test comparing level of GPC support using the 4-category response variable (strongly agree, agree, disagree, strongly disagree) between predictor categories.
[b]Multivariable *P* derived from an ordinal logistic regression model of support for GPC entry using the 4-category response variable (strongly agree, agree, disagree, strongly disagree) as the dependent variable, and all potential predictors above simultaneously included as independent variables.

For the 10 GPC knowledge questions, each respondent was given a score based on the percentage of questions they answered correctly.

We used the Fisher's exact test to assess the bivariable associations between physician characteristics and level of support for GPC involvement as measured via our 4-category response variable (strongly agree, agree, disagree, strongly disagree). We used a multivariate ordinal logistic regression model to derive factors independently associated with level of support for GPC involvement, where our 4-category response variable (strongly disagree, disagree, agree, strongly agree) was the dependent variable, and all physician characteristics were simultaneously included as independent variables. We chose ordinal regression to make full use of our ordered data, maximizing statistical power. All statistical analyses were performed with the JMP Pro 10 statistical software package (SAS Institute, Cary, North Carolina).

RESULTS

Internist Demographics

Of the 569 Department of Medicine physicians contacted, 281 (49.4%) completed our survey (Table 1). Of all respondents, 52% identified themselves as general medicine physicians, while 48% identified themselves as specialist physicians. Respondents were representative of the total survey population with respect to the proportion of generalists (52% vs 47.4%; *P* = .22). Forty-two percent of respondents had completed their residency training more than 20 years prior, and 150 physicians (53.4%) reported spending more than half their time working on a clinical service.

Two hundred and thirty-one (82.3%) respondents reported being previously exposed to educational information sources on GPCs. The most common sources of information were informal discussions with other healthcare providers, news media, and academic journals (eAppendix B).

Internist Comprehension

Median score on the knowledge portion of the survey was 70% (25th quartile = 60%; 75th quartile = 80%; mean = 66.2%; SD = 13.7). Physicians who scored equal to or greater than the 50th percentile were significantly more likely to report previously consulting any educational source about GPCs than those who scored below the 50th percentile (58.4% vs 41.6%; *P* <.001).

Physician Attitudes

Two hundred and thirty-eight (84.7%) respondents reported agreeing or strongly agreeing with the care organization's decision to enter into GPCs. Of those, 219 respondents (92%) selected at least 1 of the predefined reasons for this decision. Each respondent selected an average of 2.9 predefined reasons (25th quartile, 1 response; 75th quartile, 4 responses) The most popular reasons were a) perceived reduction in the cost of patient care and b) perceived increased competitiveness in the healthcare market (Table 2a). The least common reason was perceived personal financial benefit.

Of those who disagreed or strongly disagreed with the decision to enter into GPCs, 39 respondents (90.7%) selected at least 1 of the predefined options. Each respondent selected an average of 3.7 predefined responses (25th quartile = 2 responses; 75th quartile = 5 responses). The most popular reasons were a) perceived failure to improve the quality of patient health and b) failure to improve the quality of the physician experience (Table 2b). The least common reason was perceived failure to improve competitiveness in the healthcare market.

Associations Between Physician Characteristics and Level of GPC Support

See Table 1 for bivariable and multivariable associations between physician characteristics and level of GPC support. In our multivariate ordinal logistic regression model, variables independently associated with higher likelihood of supporting involvement in GPCs included scoring at or above the 50th percentile in the knowledge assessment (P = .01); reporting prior exposure to informational sources about GPCs (P = .01); working less than or equal to 50% clinical full-time equivalents (P <.001); and completion of residency more than 20 years ago (P <.01). There was no association between status as a generalist versus a specialist and likelihood of support for GPC involvement.

DISCUSSION

Four years since first engaging in a GPC, a majority of Department of Medicine physician survey respondents within our care organization were supportive of this decision. We identified several physician attributes independently associated with GPC support, including greater knowledge of GPCs. To our knowledge, our study represents the first published survey of academic physician attitudes on this topic.

Prior industry surveys and analyses have identified physicians as potential barriers to implementation of organizational reform.[5,7] In contrast, our study of academic internists demonstrates notable support for a model that requires significant change on an organizational level. This could be partially due to the presence of financial and nonfinancial incentives in academic medical centers that can insulate practitioners from market forces.[13,14] While this has previously been depicted as a challenge, based on our results we propose that it may also serve as a strength in facilitating organizational change.[15] Salaried physicians with academic appointments may worry less about risk-sharing agreements, as a majority of the immediate risk is carried by the physician organization or hospital. As a result, academic physicians may be more open to the idea of organizational restructuring required by GPCs, as well as issues such as cost control and quality of care (cited by 69.8% and 47.1% of respondents in support of GPC involvement). The degree to which our findings are generalizable to nonacademic settings with productivity-based compensation should be investigated.

Despite public views of physicians as being focused on financial concerns, physicians in our survey infrequently cited (11.3%) personal monetary benefit as playing a role in their decision to support or oppose involvement in a GPC.[16,17] Furthermore, despite documented "wage gaps" between generalist and specialist physicians, there was no association between generalist versus specialist status and GPC support.[18]

Understanding predictors of internist support for GPCs within our care organization may help other academic health systems approach organizational change. We found that demonstrated knowledge about GPCs and a history of educational exposure to GPCs, regardless of format, was associated with an increased likelihood of supporting involvement in GPCs. These findings suggest that physician education efforts, whether formal or informal, may be effective tools for shaping physician opinion on an organizational level.

The likelihood of supporting GPCs was positively associated with increased time since completion of residency and decreased clinical time commitment. We hypothesize that older academic internists and those who spend less time working in clinical activities may be more involved in administrative positions that allow them a better understanding of the organizational issues that motivate GPC involvement.

Limitations

Our study has several limitations. While our study sample was large enough to allow for identification of associations within our organization, the single-center nature of our study may limit generalizations beyond our

Table 2. Characteristics of Patients Receiving Care for Acute Respiratory Infections

A. Supporting	n = 238 (%)	B. Not Supporting	n = 43 (%)
Reduce cost of patient care	166 (69.8)	Quality of patient health	32 (74.4)
Competitive in the healthcare market	140 (58.8)	Quality of the physician experience	31 (72.1)
Politics	118 (49.6)	Quality of patient experience	30 (69.8)
Quality of patient health	112 (47.1)	Bring me financial benefit	20 (46.5)
Financial benefit to our physician organization	58 (24.4)	Financial benefit to our physician organization	18 (41.9)
Quality of patient experience	52 (21.9)	Reduce cost of patient care	16 (37.2)
Quality of physician experience	35 (14.7)	Other	10 (23.2)
Other	26 (10.9)	Politics	8 (18.6)
Bring me financial benefit	12 (5.0)	Competitive in the healthcare market	4 (9.3)

organization. In particular, the academic nature and high proportion of salaried physicians within the Department of Medicine limits generalizability to settings with a higher proportion of nonsalaried physicians, where GPCs may have greater financial ramifications for individual physicians. Additionally, although physician beliefs regarding certain recent health reform efforts were similar across regions, support for GPCs may depend on geography and local political leanings.[19,20] Within our organization, located in urban Massachusetts, political support for health reform was a frequently cited reason for support of GPCs. Although our survey was sent by study authors and not departmental or care organization leadership, and participants were informed that responses were anonymous, participants may have overestimated their support for GPC involvement due to perceived organizational norms. Additionally, it is possible that survey respondents differed from nonrespondents in ways that could have affected the results. Regarding our attempt to identify potentially modifiable predictors of opinion, the cross-sectional nature of our investigation limits our ability to demonstrate causation. While we found that physicians with exposure to informational sources on GPCs are most likely to support GPCs, it may be that physicians who support GPCs are more likely to seek out informational sessions. Additionally, despite our use of focus groups as part of the survey design process, it is possible that our questions were not interpreted as intended, or were interpreted differently between respondents. As we did not survey physicians in other departments, we are unable to draw conclusions about physicians outside the Department of Medicine.

CONCLUSIONS

In conclusion, in a survey of internal medicine physicians within an organization with more than 4 years of experience with GPCs, there was overwhelming support for this involvement. Greater knowledge regarding GPCs and exposure to informational sources about GPCs correlated with higher levels of support for GPC involvement. These findings suggest potential targets for increasing physician support for GPC involvement.

Acknowledgments

The authors would like to acknowledge the leadership of the Beth Israel Deaconess Medical Center Department of Medicine for their support. The statements contained in this document are solely those of the authors. The authors assume responsibility for the accuracy and completeness of the information contained in this document.

Author Affiliations: Beth Israel Deaconess Medical Center (JA-D, SJH), Boston, MA; University of California – Los Angeles (RK), Los Angeles, CA.

Source of Funding: Dr Herzig was funded by grant number K23AG042459 from the National Institute on Aging. The funding organization had no involvement in any aspect of the study, including design, conduct, and reporting of the study.

Author Disclosures: None of the authors report a relationship or financial interest with any entity that would pose a conflict of interest with the subject matter of this article.

Authorship Information: Concept and design (JA-D, SJH, RK); acquisition of data (JA-D, RK); analysis and interpretation of data (JA-D, SJH, RK); drafting of the manuscript (JA-D, RK); critical revision of the manuscript for important intellectual content (JA-D, SJH, RK); statistical analysis (JA-D, SJH); administrative, technical, or logistic support (JA-D); and supervision (JA-D, RK).

Address correspondence to: Joshua Allen-Dicker, MD, MPH, Beth Israel Deaconess Medical Center, 330 Brookline Ave, Hospital Medicine, W/Span-2, Boston, MA 02215. E-mail: DrJoshuaAD@gmail.com.

REFERENCES

1. Porter ME. What is value in health care? *N Engl J Med.* 2010; 363(26):2477-2481.
2. Roadmap for implementing value driven healthcare in the traditional Medicare Fee-for-Service Program. Baltimore, MD: CMS; 2008. https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/QualityInitiativesGenInfo/Downloads/VBPRoadmap_OEA_1-16_508.pdf. Accessed October 2012.
3. Chernew ME, Mechanic RE, Landon BE, Safran DG. Private-payer innovation in Massachusetts: the 'alternative quality contract'. *Health Aff (Millwood).* 2011;30(1):51-61.

4. CMS, HHS. Medicare program; hospital inpatient value-based purchasing program: final rule [FR 26489]. *Federal Register.* 2011;76(88). http://www.gpo.gov/fdsys/granule/FR-2011-05-06/2011-10568. Accessed October 2012.

5. Fisher ES, Staiger DO, Bynum JP, Gottlieb DJ. Creating accountable care organizations: the extended hospital medical staff. *Health Aff (Millwood).* 2007;26(1):w44-w57.

6. Landon BE. Keeping score under a global payment system. *N Engl J Med.* 2012;366(5):393-395.

7. 2011 Accountable Care Organization Survey: healthcare facility challenges and participation in ACOs. San Diego, CA: AMN Healthcare, Inc; 2011. http://www.amnhealthcare.com/industry-research/550/1033/. Accessed October 2012.

8. Molpus J. The leap to accountable care organizations. Brentwood, TN: Healthleaders Media Council; 2011. http://www.communityoncology.org/UserFiles/pdfs/leap-to-acos.pdf. Accessed October 2012.

9. Audet AM, Kenward K, Patel S, Joshi MS. Hospitals on the path to accountable care: highlights from a 2011 national survey of hospital readiness to participate in an accountable care organization. *Issue Brief (Commonw Fund).* 2012;22:1-12.

10. Emanuel EJ. Why accountable care organizations are not 1990s managed care redux. *JAMA.* 2012;307(21):2263-2264.

11. Accountable care organizations: a new model for sustainable innovation. Washington, DC: Deloitte Center for Health Solutions; 2010.

12. Health Security Act, HR 3600, 103rd Cong, 1st Sess (1993).

13. Chaix-Couturier C, Durand-Zaleski I, Jolly D, Durieux P. Effects of financial incentives on medical practice: results from a systematic review of the literature and methodological issues. *Int J Qual Health Care.* 2000;12(2):133-142.

14. Dhalla IA, Detsky AS. Aligning incentives for academic physicians to improve health care quality. *JAMA.* 2011;305(9):932-933.

15. Kastor JA. Accountable care organizations at academic medical centers. *N Engl J Med.* 2011;364(7):e11.

16. Jones R. Declining altruism in medicine. *BMJ.* 2002;324(7338):624-625.

17. Jacobs EA, Rolle I, Ferrans CE, Whitaker EE, Warnecke RB. Understanding African Americans' views of the trustworthiness of physicians. *J Gen Intern Med.* 2006;21(6):642-647.

18. Leigh J, Tancredi D, Jerant A, Kravitz RL. Physician wages across specialties: informing the physician reimbursement debate. *Arch Intern Med.* 2010;170(19):1728-1734.

19. Antiel RM, Curlin FA, James KM, Tilburt JC. Physicians' beliefs and U.S. health care reform—a national survey. *N Engl J Med.* 2009;361(14):e23.

20. Keyhani S, Federman A. Doctors on coverage—physicians' views on a new public insurance option and Medicare expansion. *N Engl J Med.* 2009;361(14):e24. ■

www.ajmc.com Full text and PDF